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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/711,504	11/14/2000	Tsuyoshi Katoh	325739/99	8052

21254 7590 05/21/2003  
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EXAMINER	
SEFER, AHMED N	
ART UNIT	PAPER NUMBER

2826

DATE MAILED: 05/21/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

<b>Office Action Summary</b>	Application No.	Applicant(s)
	09/711,504	KATOH ET AL.
	Examiner	Art Unit
	A. Sefer	2826

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

1) Responsive to communication(s) filed on 21 February 2003.

2a) This action is **FINAL**.      2b) This action is non-final.

3) Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

4) Claim(s) 1-7 and 13-16 is/are pending in the application.

4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.

5) Claim(s) 4,5 and 13-15 is/are allowed.

6) Claim(s) 1-3,7 and 16 is/are rejected.

7) Claim(s) 6 is/are objected to.

8) Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

9) The specification is objected to by the Examiner.

10) The drawing(s) filed on \_\_\_\_\_ is/are: a) accepted or b) objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

11) The proposed drawing correction filed on \_\_\_\_\_ is: a) approved b) disapproved by the Examiner.  
If approved, corrected drawings are required in reply to this Office action.

12) The oath or declaration is objected to by the Examiner.

**Priority under 35 U.S.C. §§ 119 and 120**

13) Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  
a) All b) Some \* c) None of:  
1. Certified copies of the priority documents have been received.  
2. Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.  
3. Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).  
\* See the attached detailed Office action for a list of the certified copies not received.

14) Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).  
a) The translation of the foreign language provisional application has been received.

15) Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

**Attachment(s)**

1) Notice of References Cited (PTO-892)  
2) Notice of Draftsperson's Patent Drawing Review (PTO-948)  
3) Information Disclosure Statement(s) (PTO-1449) Paper No(s) \_\_\_\_\_

4) Interview Summary (PTO-413) Paper No(s). \_\_\_\_\_.  
5) Notice of Informal Patent Application (PTO-152)  
6) Other \_\_\_\_\_

*[Signature]*  
**NATHAN J. FLYNN**  
**SUPERVISORY PATENT EXAMINER**  
**TECHNOLOGY CENTER 2800**

## DETAILED ACTION

### *Response to Amendment*

1. The amendment filed on 2/21/03 has been entered; claims 17-23 have been cancelled.

### *Drawings*

2. The drawings are objected to as failing to comply with 37 CFR 1.84(p)(5) because they do not include the following reference sign(s) mentioned in the description: The front channel 182 is not shown in fig. 10. A proposed drawing correction or corrected drawings are required in reply to the Office action to avoid abandonment of the application. The objection to the drawings will not be held in abeyance.

### *Claim Rejections - 35 USC § 102*

3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

- (e) the invention was described in–
  - (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effect under this subsection of a national application published under section 122(b) only if the international application designating the United States was published under Article 21(2)(a) of such treaty in the English language; or
  - (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that a patent shall not be deemed filed in the United States for the purposes of this subsection based on the filing of an international application filed under the treaty defined in section 351(a).

4. Claim 1 is rejected under 35 U.S.C. 102(e) as being anticipated by Yamazaki et al. US Patent No. 6,462,723

Yamazaki et al. disclose in fig. 3 a thin film transistor including a back channel electrode 701, wherein a voltage of a front channel positioned on the side of a gate wiring of said thin film

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transistor is made equal to a voltage of said back channel positioned on the side of a back channel electrode by short-circuiting said back channel electrode to a gate electrode 703 through a contact-hole 704 provided in a portion of a semiconductor layer 702 forming said thin film transistor.

***Claim Rejections - 35 USC § 103***

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

6. Claims 2, 3 and 7 are rejected under 35 U.S.C. 103(a) as being unpatentable over Yamazaki et al in view of Sakura et al. (10-290012).

Yamazaki et al disclose all the claimed subject matter but fail to disclose a back channel electrode formed of the same material as a material of a pixel electrode connected to one of source and drain electrodes.

Sakura et al disclose a back channel electrode 9 formed of the same material as a material of a pixel electrode 8 or a transparent electrode (as in claim 3) connected to one of source and drain electrodes.

Therefore, it would have been obvious to one skilled in the art at the time the invention was made to incorporate the teachings of Sakura et al with the device of Yamazaki et al, since that would reduce patterning process and increase yield.

As to claim 7, Sakura et al disclose in fig. 4 a thin film transistor including an ohmic contact layer 104' in contact with source and drain electrodes.

7. Claim 16 is rejected under 35 U.S.C. 103(a) as being unpatentable over Yamazaki et al. in view of Sakura et al.

Yamazaki et al. disclose in fig. 3 a thin film transistor including a back channel electrode 701, wherein a voltage of a front channel positioned on the side of a gate wiring of said thin film transistor is made equal to a voltage of said back channel positioned on the side of a back channel electrode by short-circuiting said back channel electrode to a gate electrode 703 through a contact-hole 704 provided in a portion of a semiconductor layer 702 forming said thin film transistor, but do not specifically disclose an ohmic contact layer in contact with source and drain electrodes.

Sakura et al disclose in fig. 4 a thin film transistor including an ohmic contact layer 104' in contact with source and drain electrodes.

Therefore, it would have been obvious to one skilled in the art at the time the invention was made to incorporate the teachings of Sakura et al with the device of Yamazaki et al, since that would provide the necessary ohmic contacts.

#### *Allowable Subject Matter*

8. Claims 4, 5, 13-15 are allowed.
9. The following is a statement of reasons for the indication of allowable subject matter:  
The prior art fails to disclose the device structure as recited in claims 4, 5, 13-15. Specifically, the references of record do not disclose or make obvious the device structure as claimed.

10. Claim 6 is objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to A. Sefer whose telephone number is (703) 605-1227.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Nathan Flynn can be reached on (703) 308-6601.

ANS  
May 18, 2003